

# On the behavior of the spectrum of the limit frequencies of digits under perturbations of a real number

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## Abstract

It is shown that, under the action of random digitwise decaying perturbations not changing the spectrum of the limit frequencies of  $r$ -adic digits, an arbitrary real number written in the  $r$ -adic number system becomes almost surely normal over all bases multiplicatively independent of  $r$ . Pleiades Publishing, Ltd., 2009.

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## Keywords

Digitwise perturbations of a number, Lebesgue measure, Normal number,  $r$ -adic number system, Spectrum of limit frequencies of digits